Micropulse Transscleral Cyclophotocoagulation in the Treatment of Patients with Primarily Severe Stage Glaucoma

Saturday, April 14, 2018
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Walter E. Washington Convention Center - Level 1, 144A

ASCRS Glaucoma

Purpose
Glaucoma is a leading cause of blindness. Intraocular pressure (IOP) is a known modifiable risk factor for glaucoma progression, making it the target of glaucoma therapies. The purpose of this study was to explore the use of Micropulse Transscleral Cyclophotocoagulation (MP-TSCPC) in lowering IOP in patients with primarily severe stage glaucoma.

Methods
Retrospective review of patients with primarily advanced stage glaucoma from Eye Care Associates (Ohio) who underwent MP-TSCPC from December 2015-October 2016. Intraoperatively, Iridex settings were 2000-2250 mW, application time was 90 seconds for both the inferior and superior sweep with a duty cycle of 31.33%. The laser probe was applied in a continuous fashion from 9:30-2:30 and from 3:30-8:30. The 3 and 9 o'clock positions were bypassed to avoid ciliary nerves. Demographic information, glaucoma diagnosis, and preoperative and postoperative IOP, BCVA and number of glaucoma medications were recorded for each patient. Postoperative follow-up occurred at 1 week and at 1, 3, and 6 months.

Results
Fifty-seven eyes underwent MP-TSCPC treatment. The mean age was 70.5. Mean IOP preoperatively was 25.0. Postoperatively, the mean IOPs at 1 week, 1 month, 3 months and 6 months were as follows: 16.9, 19.0, 20.3 and 18.2 respectively. Mean number of glaucoma medications was essentially unchanged at 3.2 preoperatively and 3.3 postoperatively at 6 months. One patient was lost to follow-up, 7 patients required a repeat procedure, and 8 patients required either a Trabeculectomy or tube shunt representing a failure rate of 14.3% (8/56). Overall, the procedure was well tolerated by patients with few patients reporting pain, irritation or other ocular symptoms.

Conclusion
Use of Micropulse Transscleral Cyclophotocoagulation (MP-TSCPC) may be an effective treatment modality to both lower and maintain lower IOP levels in patients with primarily late stage glaucoma. Further studies are needed to assess if similar results are reproducible in larger populations and to assess follow-up results after 6 months.

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